

**Response****Remarks**

Please be informed that the Applicant is entitled to claim small entity status.

New claims 86-101 which are now pending in the patent application are supported by the original disclosure.

Claim 86 relates to a confection unit containing a compound to be added to fruit for preparing a flowable or semifluid fruit-based product, said compound consisting of:

- an antioxidant agent,
- a preservative agent,
- an acidifying agent,
- a stabilizing and thickening agent,
- possibly sugar,
- possibly water.

The composition of the compound contained in the confection unit according to claim 86 is disclosed in the international patent application PCT/EP99/00370, from which the patent application in subject derives. In particular, such composition is disclosed in claim 1 as originally filed and on page 2, lines 4-5, stating that "All the agents mentioned above (i.e. antioxidant agent, preservative agent, acidifying agent, stabilizing and thickening agent) may be contained in the compound according to the invention". Examples 1-4 make clear that, if necessary, also sugar can be present in the compound, and Example 5 discloses the possible use of water. The skilled person clearly and unambiguously deduces from the application as originally filed that the compound mentioned above is contained in a confection unit.

On page 1, lines 29-32, it is stated that "An aim of the invention is to supply an user, in particular a professional user, with a compound which considerably facilitates the preparation of flowable or semifluid food products".

It is clear from the above that the compound is not prepared by the professional user before preparing the fruit-based product, but is supplied to the professional user by someone else who has previously prepared this compound. Therefore, the compound must be contained in a confection unit in which it was placed after being prepared.

Claim 98 discloses a method for preparing a flowable or semifluid product, comprising:

- providing a compound consisting of an antioxidant agent, a preservative agent, an acidifying agent, a stabilizing and thickening agent, possibly sugar, possibly water;
- making a selection of fruit;
- mixing said selection of fruit with said compound.

The method of claim 98 provides a new and inventive way of using the compound disclosed in claim 86. This method is disclosed in the examples of fruit-based products on pages 6-11 of the application as originally filed. Furthermore, on page 11, lines 24-27 there is stated that "the invention provides a practical and versatile compound which allows the user to freely choose the type of sauce to be prepared depending on the particular tastes of his customers, or on the range of fresh fruit available on the market". This makes clear that a selection of fruit has to be made, which selection of fruit has then to be mixed with the compound mentioned above.

Therefore claims 86-101 do not introduce subject-matter extending beyond the content of the application as originally filed.

The confection unit of claim 86 is novel over the cited prior art, and in particular over US 4387109 (Kahn et al) because none of the cited documents disclose a confection unit containing a compound having all and only the ingredients mentioned in claim 86. In particular, example 3 of Kahn et al discloses a compound which does not consist of the ingredients mentioned in claim 1, because it also contains dehydrated apple pieces, salt, cinnamon and nutmeg. For the same reasons, also method claim 98 is novel over the prior art.

Claim 86 is deemed to be inventive over the available prior art, in particular over Kahn et al, for the reasons that will be explained below. Kahn et al merely teaches to add starch (thickening agent), potassium sorbate (preservative agent), ascorbic acid (antioxidant agent), citric acid (acidifying agent), sugar and water to dehydrated apple pieces in order to obtain an apple donut filling. This is merely a recipe in which certain additives are mixed with a specific type of fruit (i.e., dehydrated apple pieces) to obtain a specific fruit-based product (i.e., an apple donut filling).

The confection unit of claim 86 contains a compound which can be mixed with any type of fruit depending on the preferences of the user, thereby allowing the professional user to prepare a number of different fruit-based products with a single compound. By purchasing the confection unit of claim 86, the professional user can prepare any kind of fruit-based products, such as fruit sauces, fruit salads, stuffings and fillings. All he has to do is to mix the compound contained in the confection unit of claim 86 with a selected fruit, which he can freely choose depending on the fruit available on the market in the season concerned and on the tastes of his customers.

The fruit-based product may be prepared quickly, easily and just in the required quantity, thereby enabling the professional user to always offer fresh fruit-based products to his customers. The professional user does not need anymore to buy a wide variety of industrially produced fruit sauces in order to be able to meet his customers' tastes. Thus, there is no more any risk of buying large quantities of fruit sauces that must be subsequently disposed of because they were not served to customers. Furthermore, the professional user does not have to weigh precise quantities of each additive as required by Kahn et al, because the compound contained in the confection unit according to claim 86 already has the required quantities of all the ingredients. Thus, the risk of obtaining a bad-tasting fruit-based product because of errors in selecting the proper quantities of additives is greatly reduced.

There is no suggestion in Kahn et al to provide a confection unit containing a compound as disclosed in claim 86 which may be used with any kind of fruit to obtain a fruit-based product, because Kahn et al merely teaches to mix certain additives with dehydrated apple pieces to obtain an apple donut filling. Therefore, it is believed that claim 86 is inventive over Kahn et al.

The Examiner states that “it is notoriously well-known in the art to pre-mix certain components when preparing a food product. For example, ingredients are often pre-mixed and set aside until the desired time, such as flour, salt, and baking soda when preparing cookies or flour, sugar, and butter before adding to fruit for a fruit crisp/crumble”. Therefore, in the Examiner’s opinion, it would have been obvious for a person skilled in the art, at the time the invention was made, to pre-mix the claimed components prior to use.

The Applicant respectfully disagrees with the Examiner’s opinion set out above. It is certainly well known, when preparing a particular food product following a specific recipe, to pre-mix certain ingredients of the recipe and set them aside while preparing the other ingredients. However, this does not correspond to the claimed invention, because the claimed invention does not simply teach the skilled person to pre-mix certain ingredients of a specific recipe, but rather provides users with a compound which may be used in a variety of recipes that can be freely chosen by the user. The difference between the known pre-mixes that are normally prepared while cooking a food product and the Applicant’s invention has been clarified in the wording of claim 86, which is no more addressed to a compound having certain ingredients, but rather to a confection unit containing this compound. This makes clear that the idea underlying claim 86 is not just the idea of pre-mixing certain ingredients which may be subsequently added to fruit, but is rather that of isolating in a confection unit a compound containing certain ingredients that may be added to any type of fruit for obtaining any type of sauces. This allows a professional user who purchases the confection unit of claim 86 or acts according to method claim 98 to obtain all the advantages described before as far as ease of preparation of the fruit-based product and versatility of the compound are concerned.

The properties of the fruit-based products prepared according to claim 98 by using the compound contained in the confection unit of claim 86 are explained below.

First of all, it is to be noted that each agent of the above mentioned compound has a precise function in the final fruit-based product and influences a specific property thereof. For example, the antioxidant agent prevents oxidation phenomena in the fruit and avoids fruit browning due to oxidation. By using an antioxidant agent,

the professional user can obtain a fruit-based product, such as a fruit salad or a fruit sauce, having a natural appearance which reminds the appearance of fruit just picked from a tree. The acidifying agent restores the natural acidity of fruit, which has been altered due to the addition of sugar. It therefore prevents the fruit-based product from having an excessive sweet taste which might be unpleasant for most consumers.

The stabilizing and thickening agent modifies the final consistency of the fruit-based product, thereby allowing the professional user to obtain a final product which is homogeneous and has the desired consistency. By using the stabilizing and thickening agent, the professional user may avoid undesired flowing of the fruit sauce from the surface of an ice cream or from the middle of a donut. The preserving agent protects fruit from microbial attacks and inhibits, retards or arrests the process of decomposition, fermentation or acidification of a food product. The preserving agent reduces microbial growth in the fruit-based product, which allows the fruit-based product to be conserved for a number of days without being altered by microbial attacks.

The properties of the additives mentioned above are well-known in the art. However, when testing the compound in his laboratories, the Applicant has surprisingly found that the compound disclosed in claim 86 allows the final fruit-based product to be preserved without substantial microbial attacks, for a fixed number of days, with a lower quantity of preservative agent than expected. In other words, suppose that a quantity X of preservative agent must be used to keep microbial attacks in a fruit sauce below a certain threshold for 10 days (as an example). The Applicant has surprisingly found that if the compound disclosed in claim 86 is mixed with fruit, the resulting fruit sauce may be preserved for 10 days, without microbial attacks above the desired threshold, and with a quantity of preservative agent that is lower than the expected quantity X of about 20-35% (depending on the type of fruit). This result was greatly surprising for the Applicant, because nothing in the prior art available to him indicates that, by bringing together the ingredients listed in claim 86, it is possible to achieve preservation of the food with a quantity of preservative agent significantly lower than the quantity required if only the preservative agent were mixed with fruit. The Applicant is investigating this result, but he is not able at the moment to explain why the compound of claim 86 allows a fruit-based product to be

protected from microbial attacks with a lower quantity of preservative agent. An hypothesis made by the Applicant is that the antioxidant agent and the stabilizing and thickening agent, when mixed together, form a film which encloses the fruit particles in a protective sheath. Even the smallest fruit particles or the particles having a very irregular shape are enclosed in this protective sheath, which avoids direct contact between fruit particles and atmospheric oxygen, thereby reducing microbial growth. Furthermore, the acidifying agent creates an acid environment in which it is more difficult for microbes to grow. The result of this interaction between antioxidant agent, stabilizing and thickening agent, and acidifying agent is that a significantly lower quantity of preservative agent is needed in order to preserve the fruit-based product for a preset number of days. This is an important, positive result for the Applicant, because the food regulations require that the quantity of preservative agent is kept below a maximum amount, so that no negative effects to consumers occur. Also for this reason, in addition to the versatility and ease of use of the compound mentioned above, it is therefore believed that a patent should be granted on the basis of claims 86-101.

A three month extension of time to respond the action of June 2, 2003, is requested and a check in the amount of \$475.00 is enclosed to cover the cost of the extension fee. Applicant claims small entity status. The Commissioner is authorized to charge any additional fees to our Deposit Account No. 50-0852.

Consideration of Claims 86-101 in view of the foregoing remarks is respectfully requested.

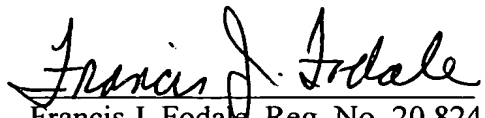
CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, on December 1, 2003.

  
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Respectfully submitted,

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# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>98344PCT</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/EP 99/ 00370</b>	International filing date (day/month/year) <b>22/01/1999</b>	(Earliest) Priority Date (day/month/year) <b>23/01/1998</b>
Applicant <b>PRE GEL S.P.A. et al.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

**ADDITIVE PRE-MIX FOR FOOD PRODUCTS**

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No. \_\_\_\_\_

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☐ None of the figures.

## INTERNATIONAL SEARCH REPORT

International Application No.

/EP 99/00370

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 A23L1/06 A23L1/064 A23L1/068 A23L1/212

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 A23L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	J.L. MULTON: "Additifs et Auxiliaires de Fabrication dans les Industries Agro-Alimentaires" 1992, LAVOISIER, PARIS XP002102803 Chap.32 see tables 2-4,6,7,9 ---	1-28
X	WO 96 39877 A (TILLIN INC ;KUHN DALE F (US)) 19 December 1996  see page 3, line 15 - page 5, line 30 see example 6 see claims 1,4 --- -/--	1-4, 8, 11, 12, 14, 15, 17, 21, 23-25, 27



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

## ° Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

17 May 1999

Date of mailing of the international search report

17/06/1999

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## INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 99/00370

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	FR 1 585 399 A (R. BOUSSER) 16 January 1970  see page 1, line 1 - page 2, line 10 see page 3, line 30 - page 4, line 30 see page 5 see page 6, line 22 - line 35 ---	1, 3-15, 17-21, 23-27
X	D.K. TRESSLER, J.G. WOODROOF: "Food Products Formulary - Volume 3" 1976, AVI, USA XP002078535 Pages 9, 13, 14, 16, 20, 27, 29, 30, 47, 65, 83, 88-91, 96-98, 100, 102, 107, 108, 117, 121 see the whole document ---	1-15, 17-21, 23-27
X	US 4 387 109 A (KAHN MARVIN L ET AL) 7 June 1983 see column 7, line 41 - line 51 see examples 1-6, 9, 10 ---	1-28
X	US 4 232 053 A (BLAKE JON R) 4 November 1980 see column 5, line 40 - column 6, line 24 see column 6, line 54 - line 65 see examples ---	1-28
X	US 4 350 711 A (KAHN MARVIN L ET AL) 21 September 1982 see column 1, line 49 - line 56 see column 7, line 65 - column 8, line 26 see examples 3, 6, 8, 9 ---	1-28
X	US 5 385 747 A (KATZ SUMNER N ET AL) 31 January 1995 see column 2, line 52 - column 3, line 43 see column 4, line 11 - line 60 ---	1-28
X	US 5 688 548 A (GAITHER KAREN S ET AL) 18 November 1997 see column 2, line 15 - column 3, line 40 see column 6, line 51 - column 7, line 14 ---	1-28
X	US 4 430 352 A (POSTNER HERMANN) 7 February 1984 see column 2, line 20 - line 51 -----	1-28

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

T/EP. 99/00370

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9639877	A	19-12-1996	AU 6329896 A	30-12-1996
			US 5858447 A	12-01-1999
FR 1585399	A	16-01-1970	NONE	
US 4387109	A	07-06-1983	US 4313967 A	02-02-1982
US 4232053	A	04-11-1980	CA 1146399 A	17-05-1983
			JP 1449932 C	11-07-1988
			JP 56026163 A	13-03-1981
			JP 62054460 B	16-11-1987
US 4350711	A	21-09-1982	US 4234611 A	18-11-1980
			US 4146652 A	27-03-1979
			US 4154863 A	15-05-1979
			US 4199604 A	22-04-1980
			AU 546283 B	22-08-1985
			AU 8571682 A	17-02-1983
			BE 893963 A	16-11-1982
			CA 1184062 A	19-03-1985
			CH 654723 A	14-03-1986
			DE 3230025 A	03-03-1983
			FI 822688 A, B,	14-02-1983
			FR 2511226 A	18-02-1983
			GB 2103919 A, B	02-03-1983
			GR 76893 A	04-09-1984
			JP 58036365 A	03-03-1983
			NL 8203083 A	01-03-1983
			OA 7181 A	30-04-1984
			PH 17584 A	02-10-1984
			SE 8204650 A	11-08-1982
			ZA 8205044 A	25-05-1983
			US 4390550 A	28-06-1983
			AU 3281278 A	02-08-1979
			BE 863403 A	27-07-1978
			CA 1107120 A	18-08-1981
			DE 2803634 A	03-08-1978
			DE 2857879 C	08-01-1987
			DE 2858023 C	08-09-1988
			DE 2858058 C	24-01-1985
			DE 2858206 C	21-04-1988
			DE 2858207 C	08-10-1987
			DK 40078 A, B,	29-07-1978
			DK 504084 A, B,	22-10-1984
			FI 780232 A, B,	29-07-1978
			FI 831168 A, B,	06-04-1983
			FR 2378456 A	25-08-1978
			GB 1548358 A	11-07-1979
			JP 1187324 C	20-01-1984
			JP 53104767 A	12-09-1978
			JP 58020250 B	22-04-1983
			JP 1213082 C	27-06-1984
			JP 58047143 B	20-10-1983
			JP 58047450 A	19-03-1983
			NL 7801039 A, B,	01-08-1978
			NL 8303364 A, B,	01-02-1984
			NL 8303365 A	01-02-1984
			NL 8303366 A, B,	01-02-1984

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

/EP 99/00370

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4350711	A		NL 8303367 A, B,	01-02-1984
			NL 8303368 A, B,	01-02-1984
			NZ 186140 A	17-08-1982
			SE 439577 B	24-06-1985
US 5385747	A	31-01-1995	AU 4656493 A	14-02-1994
			CA 2122152 A	03-02-1994
			EP 0606446 A	20-07-1994
			WO 9402030 A	03-02-1994
US 5688548	A	18-11-1997	US 5773071 A	30-06-1998
US 4430352	A	07-02-1984	DE 3118810 C	03-02-1983
			AT 9862 T	15-11-1984
			AU 546823 B	19-09-1985
			AU 8351382 A	18-11-1982
			CA 1178114 A	20-11-1984
			EP 0064654 A	17-11-1982
			SI 8211009 A	31-08-1995
			YU 100982 A	31-12-1984
			ZA 8203133 A	30-03-1983